

SimEquip Stethoscope User Manual



User Manual

Product Name: SimEquip Stethoscope

Model Number: 253K580075

FCC ID: Q7Y-253K58750X

IC: 10646A-253K58750X

Manufacturer: Elevate Healthcare

Date of Issue: 09.25. 2025



Figure 1: SimEquip Stethoscope

Table of Contents

1. Product Overview	3
1.1. Basic Functions and Purpose.....	3
1.1.1 Technical Proficiency	3
1.1.2 Auscultation Skills.....	3
1.1.3 Clinical Reasoning	3
1.1.4 Communication and Documentation	4
1.1.5 Professionalism and Patient Interaction.....	4
2. Package Contents	4
3. Installation & Setup	4
3.1. Powering the Device	4
3.2. Charging the Device.....	7
4. Wireless Operation.....	8
5. Regulatory Notices.....	8
5.1. FCC Compliance Statement	8
5.2. FCC RF Exposure Statement	9
5.3. ISED Compliance Statement	9
5.4. ISED RF Exposure Statement (SAR - Limb)	10
6. Certifications and Approvals	11
7. Safety and Maintenance.....	11
8. Support & Contact Information.....	12

1. Product Overview

The SimEquip Stethoscope is a wireless device that replicates the look and feel of a medical stethoscope. This device contains a BLE 4.2, pre-certified module to communicate wirelessly with a patient simulator or to a dedicated computer/tablet or cell phone. It allows the user to realistically auscultate a simulated patient's heart, lung, bowel and Korotkoff sounds without amplifying ambient noise. Ultimately, allowing the user to develop the skills necessary to assess a real patient.

1.1. Basic Functions and Purpose

The SimEquip Stethoscope is intended to meet the following training needs.

1.1.1 Technical Proficiency

- **Correct handling and positioning** of the stethoscope on various anatomical landmarks (e.g., heart, lungs, abdomen).
- **Proper use of earpieces and diaphragm/bell** to ensure accurate sound transmission.
- **Familiarity with device controls** (e.g., volume, sound selection, mode switching in digital simulators).

1.1.2 Auscultation Skills

- **Identification of normal vs. abnormal sounds:**
 - Heart: S1, S2, murmurs, gallops, rubs
 - Lungs: Vesicular, bronchial, crackles, wheezes, rhonchi
 - Abdomen: Bowel sounds, bruits
- **Differentiation of sound characteristics** (pitch, timing, location, intensity).
- **Recognition of pathological patterns** associated with common conditions (e.g., pneumonia, heart failure, asthma).

1.1.3 Clinical Reasoning

- **Integration of auscultation findings** with patient history and other clinical signs.
- **Formulation of differential diagnoses** based on auditory cues.
- **Decision-making** on further diagnostic steps or treatments.

1.1.4 Communication and Documentation

- **Clear verbal reporting** of auscultation findings using appropriate medical terminology.
- **Accurate documentation** in patient records or simulation logs.

1.1.5 Professionalism and Patient Interaction

- **Maintaining patient comfort and privacy** during auscultation.
- **Explaining procedures** to patients in a clear and respectful manner.

2. Package Contents

- 1 × SimEquip Stethoscope
- 1 × USB-A to USB-C-Cable
- 1 × Power Adapter
- 1 × Pair of Eartips
- 1 × Quick Start Guide
- 1 × User Manual

3. Installation & Setup

3.1. Powering the Device

To connect SimEquip Stethoscope to the patient simulator:

1. Press the power button on the side of the SimEquip Stethoscope module. The power button should be pressed for 1 second. The unit powers on and the indicator light should be Green until it synchronizes with the manikin and then turns Blue. The indicator light flashes Orange if the battery is low.
2. Place the SimEquip Stethoscope bell / chest piece over a sound tag on the manikin for approximately 10 seconds. This ensures that SimEquip Stethoscope pairs to the patient simulator. SimEquip Stethoscope displays a solid blue light when it is connected to the manikin.
3. With a patient running in Maestro, listen to any available physiologic sounds by placing SimEquip Stethoscope on the correct location. To control the volume and specific sound played at a sound location, use the Sounds controls on Maestro.
4. With a patient running in Maestro, listen to any available physiologic sounds by placing SimEquip Stethoscope on the correct location. To control the volume and specific sound played at a sound location, use the Sounds controls on Maestro.
5. To turn SimEquip Stethoscope off, press the power button.
6. Only one SimEquip Stethoscope may be used on a single simulator at a time. SimEquip Stethoscope can be paired to any EVO Patient simulator or device. To pair a SimEquip Stethoscope with a new patient simulator or device, place a powered SimEquip Stethoscope chest piece over a sound location on the new patient simulator. Once placed, the SimEquip Stethoscope automatically connects to the new simulator.



Figure 2: Using the SimEquip Stethoscope

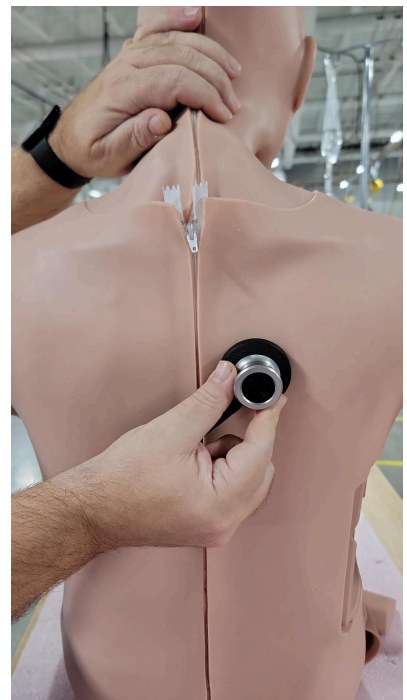


Figure 3: Auscultation zones: upper torso, abdominal/gastrointestinal & posterior

A large RFID matrix is covering the chest, abdomen and back, under the skin, allowing you to place the simulated stethoscope at many locations.

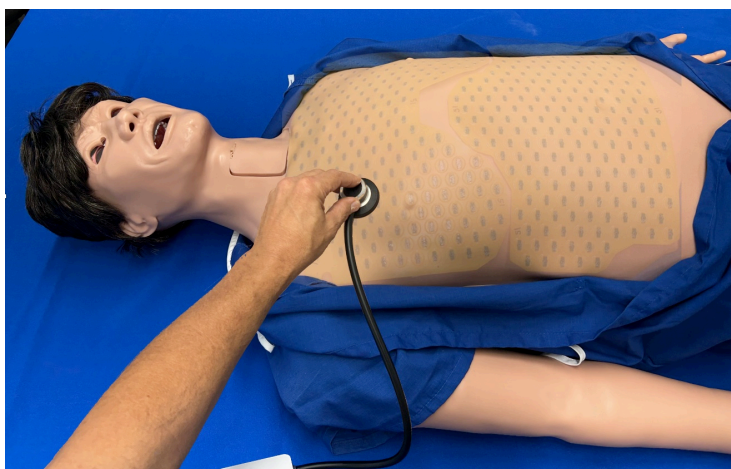


Figure 4: RFID Matrix Rib Overlay Component (graphical representation)

3.2. Charging the Device

To charge the SimEquip Stethoscope, connect the power supply adapter to the USB cable and plug the USB-C end of the cable into the SimEquip Stethoscope. Plug the power supply adapter into a grounded power outlet.

Refer to the table below for **SimEquip Stethoscope charging status** light information.

Light Color	Power Status
Solid blue	Powered on and connected to a patient simulator or device
Blinking blue	Powered on but not connected to a patient simulator or device
Solid orange	Charging. Orange light turns off when unit is fully charged.
Solid Red	Critical System Error
Solid Green	Power on initialization / Startup sequence
Double blinking blue	'Bootloader' mode (update mode)
Blinking Orange	Low battery

4. Wireless Operation

This product operates uses a 2.4 GHz Bluetooth (BLE 4.2) pre-certified module for radio communication. Radio operation is automatic and managed by the internal firmware. Users cannot modify transmission parameters such as power level, frequency, or modulation.

5. Regulatory Notices

5.1. FCC Compliance Disclaimer (Class A)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

 **Note:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

5.2. FCC RF Exposure Statement (SAR - Limb)

This device complies with FCC radiation exposure limits for **uncontrolled environments**. The Specific Absorption Rate (SAR) limit for extremities (hands, wrists, feet, ankles) is 4.0 W/kg averaged over 10 g of tissue. SAR compliance for limb-worn use was demonstrated via calculations using the device's highest certified transmit power, with the device positioned directly against the limb at 0 mm separation, in accordance with FCC evaluation procedures specified in 47 C.F.R. § 1.1310(c) and § 2.1093, and consistent with OET and KDB guidance.

5.3. ISED Non-interference Disclaimer

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This device complies with the Canadian ICES-003 Class A specifications. CAN ICES-003(A) / NMB-003(A).

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempt de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

5.4. ISED RF Exposure Statement (SAR - Limb)

This equipment complies with Innovation, Science and Economic Development Canada (ISED) RF exposure limits. The Specific Absorption Rate (SAR) measures RF energy absorbed by the body; for limb-worn devices, the limit is 4.0 W/kg averaged over 10 g of tissue. Compliance was demonstrated using calculations, with the device positioned against the limb at a 0 mm separation distance.

Cet équipement est conforme aux limites d'exposition aux radiofréquences (RF) établies par Innovation, Sciences et Développement économique Canada (ISDE). Le débit d'absorption spécifique (DAS) mesure l'énergie RF absorbée par le corps ; pour les dispositifs portés sur les membres, la limite est de 4,0 W/kg, moyenne sur 10 g de tissu. La conformité a été démontrée par calculs, l'appareil étant positionné contre le membre avec une distance de séparation de 0 mm.

6. Certifications and Approvals

- FCC ID: Q7Y-253K58750X
- IC: 10646A-253K58750X
- Contains Rigado R41Z-TA-5 BLE 4.2 Certified Module
 - FCC: 2AA9B07 (FCC part 15 modular certification)
 - IC: 12208A-07 (Industry Canada RSS-210 modular certification)
- Complies with applicable FCC Part 15.225 and ISED RSS-210 Annex B.6 standards

7. Safety and Maintenance

- Do not disassemble or modify the product.
- Do not expose the device to water, fire, or excessive heat.
- Only use supplied or certified accessories.
- Clean with a soft dry cloth only.

8. Support & Contact Information

For more information about Elevate Healthcare products, contact your regional sales manager or the Elevate Healthcare distributor in your country, or visit elevatehealth.net.

Tel +1 941-377-5562 or 866-233-6384

For customer support, please contact Elevate Healthcare.

Customer Support Headquarters - United States and Canada:

Monday - Friday from 7:00 a.m. to 6:00 p.m. ET

Phone 1-866-462-7920

Email: srqcustomerservice@elevatehealth.net

Customer Support - Europe, Middle East, and Africa

Monday - Friday from 8:00 a.m. to 5:00 p.m. CET Phone +49 (0) 6131 4950354

Email: international.service@elevatehealth.net

Customer Support - Latin America

Monday - Friday from 9:00 a.m. to 5:00 p.m. BRT/BRST

Phone +55 11 9882 66467

Email: la.service@elevatehealth.net

Customer Support - Asia Pacific

Monday - Friday from 8:00 a.m. to 5:00 p.m. CET Phone +49 (0) 6131 495 0354

Email: mailto:ap.service@elevatehealth.net